

What is claimed is:

1. A magnetic tape cartridge comprising a cartridge casing and a single reel around which a magnetic tape is wound and which is contained in the cartridge casing for rotation, said magnetic  
5 tape being fixed at the lead edge thereof to a leader pin employed for extracting the magnetic tape, both ends of said leader pin being removably held within said cartridge casing by the lateral drawing force applied thereto by a latch spring provided in the cartridge casing, said latch spring being laterally deflected  
10 by said leader pin when said leader pin is inserted into the cartridge casing and being provided with a guide surface that facilitates insertion of the leader pin into the cartridge casing and a holding portion that holds the leader pin in place within the cartridge casing after the leader pin has passed over said  
15 guiding surface, wherein

the incline angle at the point at which said leader pin is brought into abutment with said guiding surface, relative to the insertion direction thereof, is set so that regardless of said leader pin being inserted into said cartridge casing from  
20 several different insertion positions, by said insertion operation the latch spring is laterally deflected.

2. A magnetic tape cartridge according to Claim 1, wherein the incline angle at the point at which said leader pin is brought into abutment with said guiding surface, relative to the insertion  
25 direction thereof, is set within the range of  $30^{\circ} \pm 5^{\circ}$ .

3. A magnetic tape cartridge according to Claim 2, wherein

the incline angle is divided into two portion by a guide wall surface of the cartridge casing, and wherein

an angle of the guide wall surface relative to the insertion direction of the leader pin is set at  $10^\circ$ , and an angle between the guide surface and the guide wall surface is set within the range of  $20^\circ \pm 5^\circ$ .

4. A magnetic tape cartridge comprising a cartridge casing and a single reel around which a magnetic tape is wound and which is contained in the cartridge casing for rotation, said magnetic tape being fixed at the lead edge thereof to a leader pin employed for extracting the magnetic tape, both ends of said leader pin being removably held within said cartridge casing by the lateral drawing force applied thereto by a latch spring provided in the cartridge casing, wherein

said latch spring is provided with a bent portion in at least one location between the leader pin holding portion, at the free end thereof, that is brought into contact with said leader pin and the fixing portion fixed within the cartridge casing, and by said bent portion being supported by a supporting member, the arm portion between said leader pin holding portion and said bent portion is resiliently transformable, and

designating the distance between said supporting member and said leader pin holding portion is as distance L, the distance S between said supporting member and said fixing portion is set so as to satisfy the relation defined as:  $S \geq (1/3)L$ .

5. A magnetic tape cartridge according to Claim 4, wherein the latch spring is formed of a wire having a round, elliptical or angular cross-section.

6. A magnetic tape cartridge according to Claim 5, wherein the latch spring is a substantially U-shaped wire spring.

7. A magnetic tape cartridge according to Claim 5, wherein the latch spring is a wire spring bent into a crank form.

8. A magnetic tape cartridge according to Claim 5, wherein the latch spring is a substantially L-shaped wire spring.

9. A magnetic tape cartridge according to Claim 4, wherein the fixing portion is a heat-fused portion provided on a side wall of a recessed portion of the cartridge casing, wherein the fixing portion before being heat-fused comprises a protrusion on the side wall of the recessed portion with a fitting portion of the latch spring inserted between the protrusion and the side wall, and wherein

a lead end of the protrusion is heat-fused with the side wall so that the protrusion wraps around and seals in the fitting portion of the latch spring.

10. A magnetic tape cartridge according to Claim 5, wherein the fixing portion is a heat-fused portion provided on a side wall of a recessed portion of the cartridge casing, wherein the fixing portion before being heat-fused comprises a protrusion on the side wall of the recessed portion with a fitting portion of the latch spring inserted between the protrusion and the side wall, and wherein

a lead end of the protrusion is heat-fused with the side wall so that the protrusion wraps around and seals in the fitting portion of the latch spring.

11. A magnetic tape cartridge according to Claim 4, wherein  
5 the leader pin is held in a recessed portion provided on a side wall of the cartridge casing, said recessed portion located at a position adjacent to one end of the side wall, and wherein  
the latch spring is fixed on a remoter-from-end side of the recessed portion with respect to said one end of the side  
10 wall so that the leader pin holding portion of the latch spring projects into the recessed portion from the remoter-from-end side thereof.

12. A magnetic tape cartridge according to Claim 5, wherein  
the leader pin is held in a recessed portion provided on  
15 a side wall of the cartridge casing, said recessed portion located at a position adjacent to one end of the side wall, and wherein  
the latch spring is fixed on a remoter-from-end side of the recessed portion with respect to said one end of the side wall so that the leader pin holding portion of the latch spring  
20 projects into the recessed portion from the remoter-from-end side thereof.

13. A magnetic tape cartridge according to Claim 4, wherein  
the leader pin is held in a recessed portion provided on  
a side wall of the cartridge casing, said recessed portion located  
25 at a position adjacent to one end of the side wall, and wherein  
the latch spring is fixed on a closer-to-end side of the

recessed portion with respect to said one end of the side wall so that the leader pin holding portion of the latch spring projects into the recessed portion from the closer-to-end side thereof.

14. A magnetic tape cartridge according to Claim 5, wherein  
5 the leader pin is held in a recessed portion provided on a side wall of the cartridge casing, said recessed portion located at a position adjacent to one end of the side wall, and wherein  
the latch spring is fixed on a closer-to-end side of the recessed portion with respect to said one end of the side wall  
10 so that the leader pin holding portion of the latch spring projects into the recessed portion from the closer-to-end side thereof.

15. A magnetic tape cartridge comprising a cartridge casing and a single reel around which a magnetic tape is wound and which is contained in the cartridge casing for rotation, said cartridge  
15 casing is provided with a tape outlet opening for extracting the magnetic tape, and said tape outlet opening is provided with an opening and closing slide door, wherein

said slide door is provided with an opener portion that abuts against the door opening member of the record and playback  
20 apparatus to move said slide door in the opening direction, and a lock portion that engages with an engaging portion of said cartridge casing to lock said slide door in the closed position, and is brought into abutment with the door opening member of the record and playback apparatus to unlock the engaging portion.

25 16. A magnetic tape cartridge according to Claim 15, wherein a slit groove is formed at each of an upper-end portion

and a lower-end portion of a base of the opener portion so that the base of the opener portion has lowered stiffness enabling resilient transform thereof, and wherein

5 a portion between the lock portion and a lead end of the opener portion is inclined so as to project forward.

17. A magnetic tape cartridge according to Claim 15, wherein the opener portion is transformed in the outward direction with respect to the cartridge casing, unlocking engagement between the locking portion the engaging portion.

10 18. A magnetic tape cartridge according to Claim 16, wherein the opener portion is transformed in the outward direction with respect to the cartridge casing, unlocking engagement between the locking portion the engaging portion.

19. A magnetic tape cartridge comprising a cartridge casing  
15 and a single reel around which a magnetic tape is wound and which is contained in the cartridge casing for rotation, said cartridge casing is provided with a tape outlet opening for extracting the magnetic tape, and said tape outlet opening is provided with an opening and closing slide door, wherein

20 said slide door is provided with an opener portion that abuts against the door opening member of the record and playback apparatus to move said slide door in the opening direction, and a through-hole that serves as an engaging hole formed in a wall of the cartridge casing through which a projecting-type locking  
25 member provided with a warped portion is inserted and engaged from inside the cartridge casing to lock the slide door in the

closed state, and

an unlocking member inserted into the engaging hole from outside the cartridge casing transforms aforementioned warped portion through the projecting-type locking member, whereby the  
5 projecting-type locking member is moved to the unlocked position.